

Ocean gales and storms, November, 1925—Continued

Vessel	Voyage		Position at time of lowest barometer		Gale began	Time of lowest barometer	Gale ended	Lowest barometer	Direction of wind when gale began	Direction and force of wind at time of lowest barometer	Direction of wind when gale ended	Highest force of wind and direction	Shifts of wind near time of lowest barometer
	From—	To—	Latitude	Longitude									
NORTH PACIFIC OCEAN—Continued													
West Cayote, Am. S. S.	Japan	San Francisco	46 30 N.	171 40 E.	5th	7 p., 5th	7th	9.221	SSE	SSE., 8	WNW	W., 11	SSE.-SSW.-W.
Havre Maru, Jap. S. S.	do	Coos Bay	47 50 N.	138 18 W.	6th	4 a., 6th	7th	29.09	NW	SE., 8	WSW	S., 11	SE.-WSW.
Tokiwa Maru, Jap. S. S.	Yokohama	Victoria	47 13 N.	170 10 E.	5th	4 a., 6th	8th	28.68	S	W., 11	W	W., 11	SW.-W.
Oakridge, Am. S. S.	Davao, P. I.	Columbia R.	45 53 N.	146 28 W.	5th	9 p., 9th	10th	29.10	SE	W., 7	W	W., 11	WSW.-W.
West Prospect, Am. S. S.	Manila	San Francisco	42 N.	173 30 W.	5th	2 a., 5th	12th		SSE	SSE., 10	W	W., 11	Steady.
Makana, Am. S. S.	Everett	Kahului	44 18 N.	131 32 W.	9th	4 a., 9th	9th	29.55	SE	SE., 8	SE	SE., 8	Do.
Varanger, Nor. S. S.	San Pedro	Vancouver	48 02 N.	125 W.	8th	4 a., 9th	11th		NW	NW., 11	NW	NW., 11	Do.
India Arrow, Am. S. S.	Shanghai	San Pedro	45 46 N.	147 47 W.	11th	3 p., 11th	15th	29.29	SSW	NW., 8	NW	NW., 9	Do.
(An unknown S. S.)		Southward	17 N.	102 W.	10th	2 a., 11th	11th	29.19	NE	NW., 11	SW	NW., 11	Do.
Iyo Maru, Jap. S. S.	Victoria	Yokohama	44 10 N.	155 30 E.	12th	8 p., 12th	13th	28.98	ESE	SW., 12	W	SW., 12	SW.-W.
West Cayote, Am. S. S.	Japan	San Francisco	48 45 N.	138 15 W.	12th	3 a., 12th	13th	29.49	S	S., 8	S	S., 11	Steady.
Yokohama Maru, Jap. S. S.	Yokohama	Victoria	41 02 N.	153 42 E.	13th	Noon, 14th	15th	29.13	ESE	NW., 8	NNW	NW., 9	ESE.-S.-NNW.
West Himrod, Am. S. S.	Seattle	Kobe	48 10 N.	170 22 E.	13th	8 a., 13th	16th	29.31	SSE	SSE., 8	SW	WSW., 11	SW.-WSW.
West Jessup, Am. S. S.	Davao, P. I.	Portland	40 09 N.	167 04 E.	14th	4 a., 15th	15th	29.66	SSW	W., 10	NW	W., 10	WSW.-W.
Iwatesan Maru, Jap. S. S.	Yokohama	San Francisco	41 25 N.	155 35 E.	14th	2 p., 14th	15th	29.28	S	NW., 8	NNW	NNW., 10	Variable.
Shenandoah, Am. S. S.	Los Angeles	Port Arthur	15 08 N.	97 27 W.	16th	7 p., 16th	17th	29.86	NNE	N., 8	N	NW., 10	N.-NE.
Melyo Maru, Jap. S. S.	Muroran	Vancouver	42 27 N.	149 35 E.	16th	6 a., 17th	17th	29.40	NW	NW., 9	NNW	NW., 9	NW.-WNW.
West Carmona, Am. S. S.	Hongkong	San Francisco	39 50 N.	159 26 W.	18th	6 a., 19th	19th	29.74	SSE	SSW., 8	SW	S., 10	SSE.-S.-SW.
Grootendijk, Du. S. S.	Astoria	Balboa	14 30 N.	96 03 W.	22d	8 p., 22d	23d	29.76	NNE	NNE., 8	N	NNE., 9	Steady.
Pres. Taft, Am. S. S.	San Francisco	Yokohama	25 06 N.	165 24 W.	22d		22d	29.88	NNW	NNW., 8	N	NNW., 8	SW.-NNW.
Albert Jeffreys, Am. S. S.	Norfolk	Los Angeles	13 50 N.	93 53 W.	22d	6 p., 22d	24th	29.85	NNW	NNW., 8	NE	N., 9	
Emp. of Russia, Br. S. S.	Yokohama	Vancouver	48 52 N.	175 W.	25th	9 p., 25th	26th	29.18	SE	SSE., 9	WNW	SSE., 9	
Tsuyama Maru, Jap. S. S.	Otaru	San Francisco	47 05 N.	170 10 E.	25th	4 a., 26th	29th	28.92	WSW	WSW., 7	WSW	SSE., 9	SW.-S.-SSE.
Tenyo Maru, Jap. S. S.	San Francisco	Yokohama	30 41 N.	141 30 W.	26th	Noon, 27th	28th	29.35	SSE	SW., 8	NNE	NW., 9	
Maul, Am. S. S.	Honolulu	San Francisco	30 N.	143 W.	27th	4 a., 28th	28th	29.58	NW	NW., 7	NW	NW., 8	NW.-WNW.
Hokkai Maru, Jap. S. S.	Japan	Vancouver	50 10 N.	159 20 W.	28th	3 a., 28th	Dec. 3.	29.46	SSW	S	SW	S., 10	S.-SSW.

1 Uncorrected.

NORTH PACIFIC OCEAN

By WILLIS EDWIN HURD

After the rather unusual breaking down of the North Pacific anticyclone in October, the November observations show its fairly complete establishment over the central waters of the eastern part of the ocean. On the 23d, however, its center lay north of Midway Island, or well to the west of its normal position. At this time a small, shallow low developed east of the Hawaiian Islands. The low spread and moved northeast and by the 27th and 28th had covered the entire water area east of 150° W. and south of 50° N., except in the equatorial region, with moderate gales in the western quadrants. At the close of the month it had merged with the cyclone then covering Alaska and adjacent waters. The HIGH at the end of the month had moved to a position north of the Hawaiian Islands midway between the trough to the east and another cyclone of little-known intensity which had developed near Midway Island on the 29th.

The Aleutian cyclone was strongly developed during most of the month, and pressures were below normal from Juneau westward to the 180th meridian. In fact, no high-pressure readings occurred over the Aleutians and southwestern Alaska, and it was on only one or two days here that there were readings in excess of 30 inches. These conditions are well shown by the following table of atmospheric pressures for several island and coast stations:

Station	Average pressure	Departure from normal	Highest	Date	Lowest	Date
	Inches	Inches	Inches		Inches	
Dutch Harbor ¹	29.38	-0.21	30.04	23d	28.72	19th.
St. Paul ¹	29.44	-0.18	30.04	do	28.34	28th.
Kodiak ¹	29.33	-0.21	30.06	2d	28.62	10th.
Midway Island ^{1,2}	30.10	+0.03	30.30	22d	29.64	29th.
Honolulu ³	30.03	0.00	30.12	14th	29.87	4th.
Juneau ¹	29.68	-0.08	30.34	20th	29.02	10th.
Tatoosh Island ^{1,4}	30.02	+0.05	30.62	do	29.40	Do.
San Francisco ^{1,4}	30.13	+0.03	30.46	14th	29.87	23d.
San Diego ^{1,4}	30.05	+0.05	30.28	do	29.83	Do.

¹ P. m. observations only.² 28 days.³ A. m. and p. m. observations.⁴ Corrected to 24-hour mean.

November was one of the three stormy months thus far occurring in 1925. Along the northern steamer routes, or, roughly, between the 40th and 53d parallels, gales of force 8 or over occurred somewhere daily and, as gathered from the various reports, gales of force 11 to 12 were experienced by vessels on eight days. These were the 6th, 9th, 11th, 12th, 13th, 15th, 20th, and 28th. The 6th, perhaps, showed the most widespread area of tempestuous winds, since gales of force 11 were reported on that day from near 47° N., 177° E., 46° N., 165° W., and 48° N., 138° W., in addition to gales of lesser severity in other parts of the sea. On the 13th whole gales to storm winds occurred over a considerable area in east and west longitudes. On the 12th occurred the only hurricane velocity recorded, that being noted in 44° 10' N., 155° 30' E., by the Japanese steamer *Iyo Maru*. The American steamer *West Prospect*, while on a voyage from Manila to San Francisco, encountered gales, highest force 11, from the 5th to the 12th, between 175° W. and 135° W., nearly along the 42d parallel. Snow and other forms of frozen precipitation occurred over the northernmost traveled routes on several days.

At Honolulu east winds continued to prevail. The maximum wind velocity was 31 miles from the northeast, on the 27th. The average velocity was 10.1 miles per hour, which equals the previous highest record for November, that of 1913. The precipitation was 1.35 inches, which is 2.49 below the normal.

In the Far East there was some typhoon activity early in the month. This is fully treated in the accompanying article by the Rev. José Coronas, of the Manila Observatory.

In North American tropical waters a case of cyclonic development occurred, which is extraordinary for so late in the season. This disturbance appeared on the 10th off the coast near Acapulco, where it was experienced by a southbound vessel, whose identity was not given by the observer. The gale as experienced began from the east early on the evening of the 10th, and by midnight, in 17° N., 102° W., was blowing at force 10 from the north. Two hours later the wind had gone into northwest, force 11, lowest pressure 29.19, uncorrected. By 8 a. m. of the 11th the wind had moderated to force 7, southwest.

while the pressure had risen to 29.72. On the morning of the 11th the storm lay off Manzanillo, where it gave locally heavy rains to some of the coast towns, but no later report concerning it is yet available. It is interesting to note in connection with this storm that a disturbance appeared over the northwestern part of the Gulf of Mexico on the afternoon of the 12th.

On the 15th a northeast gale of force 8 was experienced by the British steamer *Toco*, in 17° 15' N., 107° W., accompanied by only a slight depression of the barometer. On the 16th, 17th, 22d, and 23d gales of force 8 to 10 occurred over and south of the Gulf of Tehuantepec, but these were not accompanied by barometric disturbances. Observers of the whole northeast gales of the 16th and 17th report that they began and ended suddenly, their onset being accompanied by heavy rain squalls, which shortly cleared, so that generally fair weather prevailed during the remainder of the blow.

Fog was little observed in west longitudes this month, except along the American coast north of the 30th parallel. West of the 180th meridian scattered observations of fog were recorded on eight days.

WATERSPOUT ON THE SOUTH PACIFIC OCEAN

Mr. J. V. Bray, second officer of the British motor ship *Aorangi*, Capt. R. Crawford, Sydney, Australia, toward Honolulu, gives the following account of a waterspout observed November 1, 1925, in 5° 42' S., 172° 39' W.:

When first observed at 7 a. m. by senior second and fourth officers, waterspout appeared descending from a white cumulus cloud and revolving in a counterclockwise direction. The phenomenon disappeared about 20 minutes after first observed, and about half way down during descent the spout could be plainly seen to take a sharp turn almost at right angles, curving around a small cumulus cloud underneath; also spray, distinctly white, to be seen rushing up the spout. When abeam it lifted and disappeared. The whole aspect was white—ascending spray and descending cloud. The clouds were of a clearly defined cumulus type. Other observers state that before final descent the spout thinned and could be seen through. Distance of spout, 2½ miles; estimated height, 3,000 feet. Sky clear, one-fifth clouded by tumulus. Wind ENE. 1. Temperature 83°.—W. E. H.

TWO TYPHOONS OVER THE PACIFIC AND ONE DEPRESSION OVER THE PHILIPPINES IN NOVEMBER, 1925

By Rev. JOSÉ CORONAS, S. J.

[Weather Bureau, Manila, P. I.]

The first Pacific typhoon had appeared already in our weather maps, on the 24th of the last month of October, near 145° or 146° longitude E. and 9° latitude N. It moved first WNW., passing about 100 miles to the north of Yap in the afternoon of the 27th. On the 28th it began to move northwestward about 600 miles to the east of north Samar. The steamer *Comliebank*, on her way from San Francisco to Manila, was well under the influence of this typhoon on the 28th and 29th. On October 31, when the center was east of Balintang Channel near 127° longitude E. and 20° latitude N., there was a decided change of the direction to the N. and N. by E., the center being situated at 6 a. m. of November 1 to the south of Naha in about 25° latitude N. between 127° and 128° longitude E.; the barometric minimum in Naha was then 745.5 mm. (29.35 ins.) with strong winds from NE. The typhoon finished its recurving to ENE. on November 1, and filled up on the 2d between Japan and the Bonins.

The second Pacific typhoon was shown by our weather maps on October 31 over the western Carolines near 150°

longitude E. and 8° latitude N. It moved NNW. on October 31, NW. and WNW. on November 1, and recurved to the N. and NE. on November 2 and 3. The center of the typhoon passed about 100 miles to the north of Yap in the afternoon of November 1. The recurving to the north took place near 138° longitude E. and 19° latitude N. Our maps showed the center to the southeast of the Bonins at 6 a. m. of the 4th near 145° longitude E. and 24° latitude N. moving NE. or NE. by E.

The depression which traversed the Philippines on the 9th of November appeared at 6 a. m. of the 6th to the SSE. of Yap near 140° longitude E. and 5° latitude N. After moving practically WNW. for over two days, it crossed the Visayan Islands on the 9th with an almost due west direction and an extraordinary rate of progress of nearly 19 miles per hour. The center reached the southern part of Indochina in the early morning of November 11.

ADDITIONAL NOTE ON TROPICAL CYCLONE OF OCTOBER 22-25, 1925, OFF WEST COAST OF MEXICO

By CHARLES C. ALLEN

[Weather Bureau Office, San Francisco, Calif., December 22, 1925]

During the latter part of October, 1925, a tropical storm of violent character appeared off the west coast of Mexico to the south of latitude 20° N., moving in a direction along the Panama-San Francisco steamer route until it turned inland near Cape Corrientes on the 24th-25th.

This disturbance, which has already been referred to in the MONTHLY WEATHER REVIEW, for October, overtook several steamers in its progress along the coast. Capt. J. A. Mordue, of the British steamer *Kathlamba* has furnished a detailed and interesting report of his encounter with this cyclone.

On the night of October 22-23 it became evident that a storm from the south was overtaking the *Kathlamba*, the wind having changed during the night from light and variable to fresh easterly, accompanied by squalls. The barometer remained steady at 29.78 inches until noon of the 23d, after which hour the pressure fell steadily, and after 8 a. m. of the 24th quite rapidly (from 29.60 ins. at 8 a. m. to 28.57 ins. at noon), with the wind backing to the northeast and north, increasing to force 12. As the backing of the wind indicated that the center of the storm was moving upon the ship quite swiftly, and even then swerving to the eastward, Captain Mordue altered his course to the westward in hope of escaping the full violence of the storm. He succeeded in that one particular, but nevertheless experienced wind and sea of great fury. His own words tell graphically of the situation at the height of the storm, when in an estimated position at noon, October 24, of latitude 18° 53' N., and longitude 106° 05' W. At that time the wind was north, force 12, and the lowest pressure reading was 28.57 inches. His description, in part, reads:

During this time the wind was sweeping overhead. Canvas weather screens and dodgers and light awnings over the bridge and poop were torn from their fastenings and whirled away to leeward. One of the starboard boats was blown adrift from its chocks, and some idea of the force of the wind can be formed from the fact that the pressure on the steam whistle lanyard was sufficient to cause the whistle to sound full blast at frequent intervals.

The ship was swept by a continuous blinding smother of rain and spray through which the dim loom of the white painted foremast could just be discerned from the bridge—the limit of our vision forward, the forecabin head and all on it being completely obliterated.